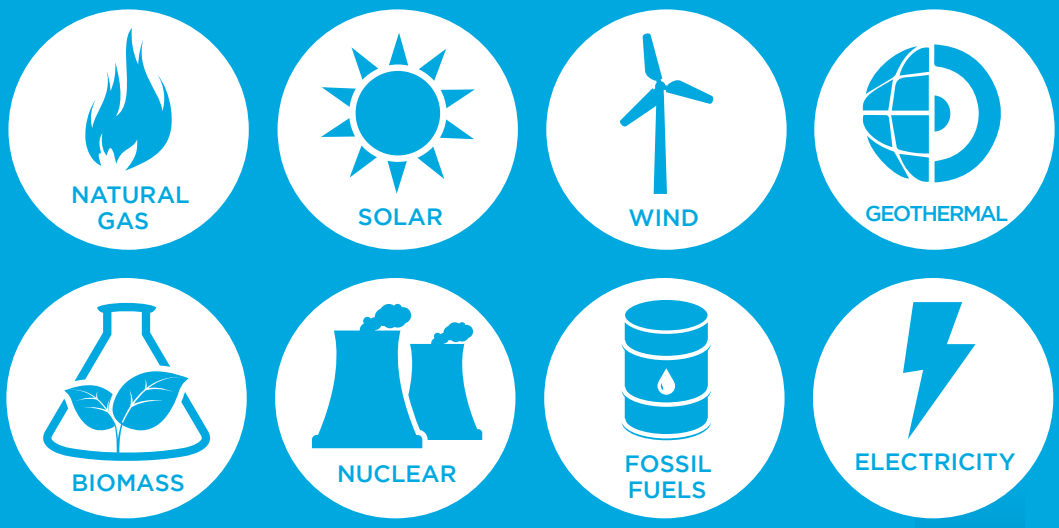
HYDROGEN

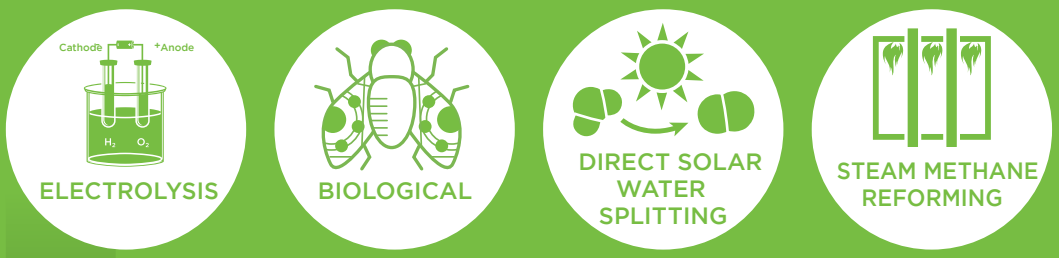
A Flexible Energy Carrier

1. SOURCES OF ENERGY

Hydrogen can be produced using diverse, domestic resources.



2. PRODUCTION PATHWAYS



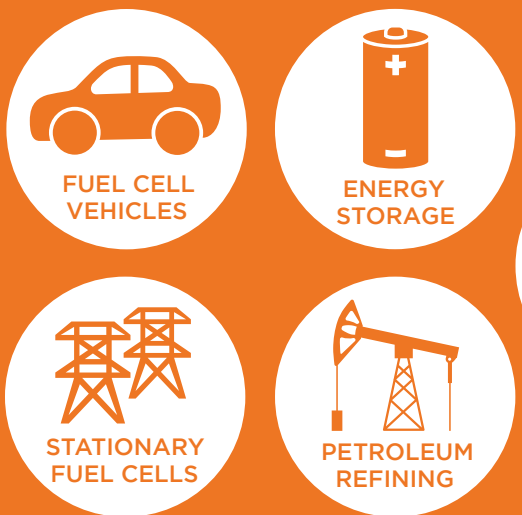
Hydrogen can be produced using a number of different processes.

10 million metric tons of hydrogen are produced per year.

3. ENERGY CARRIER

Hydrogen is the simplest and most abundant element known. It is an energy carrier, not an energy source and can deliver or store energy. It has a very high energy content and can be used in fuel cells to generate electricity or power and heat.

4. USES FOR H_2



Petroleum refining and fertilizer production are the largest uses of hydrogen today, while transportation and utilities are emerging markets. Hydrogen and fuel cells can provide energy for use in diverse applications, including distributed or combined-heat-and-power; backup power; systems for storing and enabling renewable energy; portable power; auxiliary power for trucks, aircraft, rail, and ships; specialty vehicles such as forklifts; and passenger and freight vehicles, including cars, trucks and buses.

U.S. DEPARTMENT of ENERGY | Office of Energy Efficiency and Renewable Energy
Hydrogen & Fuel Cell Technologies Office